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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,136	07/29/2003	Michael J. Hubbard	GT-4751	6579

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EXAMINER	
HARAN, JOHN T	

ART UNIT	PAPER NUMBER
1733	

DATE MAILED: 03/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/629,136	HUBBARD ET AL.	
	Examiner	Art Unit	
	John T. Haran	1733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *29 July 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-8* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-8* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 July 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

The specification should be amended to indicate that the parent application 009/197,140 is now U.S. Patent 6,615,892.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 4 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 4 and 5 are indefinite because the have abbreviations and it is unclear for what they are abbreviations. It appears the adhesives are thermoplastic polyolefins (TPO) or thermoplastic elastomers (TPE). The claims should be amended accordingly.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hollis (U.S. Patent 4,337,112) in view of McCarville et al (U.S. Patent 4,931,126), Davis et al (U.S. Patent 5,545,685), and the admitted prior art.

Hollis is directed to a method and apparatus for making a composite roofing membrane of indefinite length and a predetermined width. The apparatus contains means for seaming regions of overlapping pieces of EPDM membrane, which are supplied to the apparatus from a single supply roll of uncured EPDM membrane. Hollis also teaches the advantages of having the composite roofing membrane of larger width, which the method and apparatus produces, such as the reduction in cost and application time as a result of covering roofs with larger sheets of EPDM roofing membrane (Column 1, lines12-67 and Column 10, lines 36-44). The reference does not teach providing a plurality of supply rolls, but rather uses a single supply roll from which strips are cut and aligned next to one another in an overlapping manner. However, it would have been obvious to one of ordinary skill in the art at the time the invention was made to use a method with a plurality of supply rolls in view of McCarville et al.

McCarville et al is directed to "a seaming apparatus and method for producing a continuous sheet of thermoplastic material having a predetermined width from a plurality of elongated thermoplastic tapes each having edges defining a transverse width less than the predetermined width and each tape being wound on a roll (Column 2, lines 54-58)." The apparatus contains a plurality of rolls supplying the plurality of tapes, a seaming zone for seaming the individual tapes into a continuous sheet, and a rotating

take-up roll for collecting and storing the continuous sheet (Column 2, line 59 to Column 3, line 7).

One skilled in the art would have readily appreciated that it is well known and conventional in the sheet handling art to form a composite sheet with a single supply roll wherein the pieces of sheet are pulled out and cut and then laterally moved to overlap another cut sheet and seamed together as taught in Hollis or to form a composite sheet with a plurality of supply rolls arranged so that the sheets are pulled out in an overlapping manner and seamed together as taught in McCarville et al. The two methods are alternative expedients, obvious over one another. It would have been within the purview of one skilled in the art to determine which method to utilize for forming a composite roofing membrane of indefinite length and a predetermined width. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of rolls of EPDM membrane, to simultaneously feed the EPDM membranes in a first direction wherein the edges of the EPDM membranes are in overlapping relationship, and to seam the overlapping edges together to form a composite roofing membrane in the method of Hollis, as suggested in McCarville et al.

Hollis does not teach supplying cured EPDM to form the composite.

The admitted prior art states that it is known to" splice cured sheets of EPDM roofing membrane together" which overlap on a roof. It is noted that it is stated the cured sheets were spliced together, but the procedure for splicing the sheets is not mentioned, merely that they were spliced together and that the adhesion is poor (Specification, page 1, lines 14-26).

Davis et al is directed to a method for bonding cured EPDM membranes together. Davis et al teach that it is well known and conventional to use cured EPDM membranes for covering roofs and that it is necessary to form a seam in the areas of overlapping cured EPDM roof sheeting (Column 1, lines 35-55). The reference also teaches that it is known to apply adhesive between the overlapping cured EPDM roofing sheets and that it is often necessary to apply heat and pressure to obtain good adhesion (Column 2, lines 19-39).

Hollis teaches it is known to seam together pieces of uncured EPDM sheets and the admitted prior art and Davis et al teach it is known to seam together pieces of cured EPDM membrane. It is also noted that the composite sheet formed in Hollis would need to be cured before being utilized to cover a roof, which is its intended purpose. One of ordinary skill in the art would recognize that since it is known to seam overlapping pieces of cured EPDM membrane and that a composite sheet of uncured EPDM roofing membrane needs to be cured before covering a roof. One skilled in the art would have readily appreciated that there are two options for forming a composite roofing sheet utilizing the apparatus of Hollis, as modified above. The first is to seam together sheets of uncured EPDM membrane with the apparatus and the composite sheet is then cured and utilized in covering a roof. The second option is to cure the EPDM membrane first and supply the cured EPDM to the apparatus to seam the sheets of cured EPDM membrane together, seaming cured EPDM membrane together being well known as taught by Davis et al and the admitted prior art. The composite sheet of cured EPDM roofing membrane is then applied to a roof. It would have been within the purview of

one skilled in the art to determine which option is the most efficient. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a plurality of rolls of EPDM membrane, to simultaneously feed the EPDM membranes in a first direction wherein the edges of the EPDM membranes are in overlapping relationship, and to seam the overlapping edges together to form a composite roofing membrane in the method of Hollis, as suggested in McCarville et al and for the rolls of EPDM membrane to already be cured, as suggested in the admitted prior art and Davis.

Regarding claims 2-3, Davis teaches bonding the cured EPDM membranes with adhesive and one skilled in the art would have readily appreciated that the adhesive is either applied before or after overlapping and that the two are alternate expedients obvious over one another. It would have been obvious to do either.

Regarding claims 4-5, Davis teaches the adhesive can be TPO or TPE (See Column 4, line 63 to Column 5, line 35).

Regarding claims 6-7, Hollis teaches seaming under heat and pressure and Davis teaches seaming the cured EPDM membranes together with adhesive under heat and pressure.

Regarding claim 8, one skilled in the art would have readily appreciated cutting the cured EPDM membrane to a desired length in order to have a composite roofing membrane of a desired length and it would have been obvious to do so.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **John T. Haran** whose telephone number is **(571) 272-1217**. The examiner can normally be reached on M-Th (8 - 5) and alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (571) 272-1226. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

John T. Haran
Examiner
Art Unit 1733